

## FPA System Preparedness Module – Business Rules

RULE NO.	BUSINESS RULE	RELATED USE CASE
1.	The FMU will contain only one set of fuel conditions and weather data for a given analysis.	FPA01-02
2.	The set of attributes within an FMU are unique within the planning unit.	FPA01-02
3.	An FMU Type field will be defined for each FMU to facilitate comparison of FMUs within a planning unit and across planning units. FMU type will define similarity based on predefined attributes. FMU Type could be a function of condition class, fuels, topography, cover, etc. This will help to standardize the process.	FPA01-02
4.	FPA will use FMU definition from Fire Management Plan (FMP) template.	FPA01-02
5.	The FPA system may be used to define interagency FMUs or to combine planning units to show efficiencies.	FPA01-02
6.	Fire behavior data is considered to be the same throughout the Fire Management Unit for a given outyear budget analysis.	FPA01-02-02
7.	FPA will contain the functionality to import historic fire occurrence and weather data from PCHA or other external systems that conform to the PCHA format.	FPA01-02-02
8.	Weather variable data standards will be NFDRS, e.g. wind measured at 20 ft. Weather data does not need to meet NFDRS standard for site location, e.g. southern exposures mid slope.	FPA01-02-02
9.	Weights for the fire program analysis objectives should be developed in consultation with the interagency and /or interdisciplinary team that represents the interests of all the stakeholders.	FPA01-02-03
10.	The weights specified for FMU Objectives are proportional and define a ratio of relative importance.	FPA01-02-03
11.	FMU Objectives are stated as less than number of acres burned by FIL by FMU. E.g. For FMU1, FIL1 all fires need to be less than 800 acres; For FMU1, FIL2 all fires need to be less than 500 acres.	FPA01-02-03
12.	The objectives are the result of negotiations between competing interests within the FMU. The FPA system will not reconcile differences in objectives; this is an organizational process.	FPA01-02-03
13.	The Agency unit will be responsible for translating resource management goals and objectives into fire management goals and objectives. FPA will not develop this process or support it through the software application. FPA will define categories of objectives and what the objective needs to look like to run the model. Example Objective: The range (maximum – minimum) of allowable burn by FIL by acre for each FMU.	FPA01-02-03
14.	Quantifiable fire management objectives will be expressed in terms of acres by FIL by FMU for preparedness.	FPA01-02-03

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15.	The National Wildfire Coordinating Group (NWCG) standards for preparedness module configuration of resources will be used.	FPA01-03-01
16.	FPA will use the NWCG standard for resource kind and type.	FPA01-03
17.	FPA will use standard line production rates as defined by NWCG for all initial attack resources.	FPA01-03
18.	When determining the optimal set of resources, the FPA model may deploy initial attack resources from the set of existing resources and/or the set of potential resources.	FPA01-03
19.	FPA will use a standard method for calculating fixed operating rate and fire suppression costs.	FPA01-04-02
20.	A fire has exceeded initial attack capability if it is not controlled within 48 hours or 300 acres, (Reference: <i>10-Year Comprehensive Strategy</i> ) or as calculated by the model which means the model cannot keep up with the line building for the perimeter generated by the rate of spread.	FPA01-05
21.	The NWCG Glossary is the project standard for definition of terms.	FPA01-05
22.	The model will be run initially at the planning unit level.	FPA01-05
23.	Cost effectiveness will be measured across all fire management units within the planning unit. There is only one level of optimization: the planning unit.	FPA01-05
24.	Local Data Administrators will be defined by the interagency team of Local Agency Fire Planners.	FPA01-05
25.	An Agency should exclude lands from their budget request, if there is a contract to provide fire protection from another Agency.	FPA01-05
26.	The FPA System will record when the simulated fire exceeds a fire management objective within the FMU.	FPA01-05
27.	Objectives and their associated weight are used by the FPA System model to determine the priority for protecting acres from being burned at the identified FIL. The model assigns initial attack resources based on this priority.	FPA01-05
28.	FPA will determine the degree that an objective is met at a budget level. Optimization will accomplish this through a slack variable.	FPA01-05
29.	The model will maximize effectiveness for a given cost (budget), which is a constraint.	FPA01-05
30.	Where the ratio of weights between two planning units is identical, the Optimization Model (Model) can build equivalence between the two units to allocate resources for determining cost effectiveness.	FPA01-05
31.	The process of determining containment will be part of the Model, not the fire behavior simulator.	FPA01-05

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32.	FPA will not try to simulate all the management decisions that may influence suppression costs and fire containment time into the Model. Fires will be contained based on mathematics not on management.	FPA01-05
33.	A national database with the results of all the planning analysis and budgeting will be created and maintained as part of the FPA System PM project.	FPA01-07